# MOBILE LAUNCH PLATFORM/VEHICLE ASSEMBLY BUILDING (MLP/VAB) AREA REMEDIATION FACT SHEET

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**
**KENNEDY SPACE CENTER**
**BREVARD COUNTY, FLORIDA**

## Location

The MLP/VAB is located east of State Road 3 (Kennedy Parkway) in the Launch Complex 39 Area.

## History

The MLP and VAB are active NASA-operated facilities which were originally built to support Apollo/Saturn-V vehicle assembly and later modified (1976) to support Space Transportation System (STS) shuttle missions. Construction of the MLP and VAB started approximately in 1963 and was completed in 1966. Historically the MLP sites were used to repair post launch corrosion and/or blast damage on the launch platforms prior to their reuse. The MLP sites were the original construction sites for the three Apollo Mobile Launchers and the VAB is used to stack and prepare the space vehicles prior to launch. The Space Shuttle's solid rockets booster segments, external tank, and the orbiter are processed and mated inside the VAB. Preliminary investigations at the MLP indicated that metals and polynuclear aromatic hydrocarbons (PAHs) were present in soil. It also determined the presence of volatile organic compounds (VOCs) in groundwater. A RCRA Facility Investigation (RFI) was conducted from 1997-2003 which determined that approximately 115 acres of groundwater were negatively impacted by VOCs. In addition, an Interim Measure (IM) was performed from 1999-2000 to remove PCB-impacted soils. A Corrective Measures Study (CMS) evaluated potential sources of VOCs, distribution of ammonia in groundwater, and groundwater cleanup alternatives.

## Treatment

The final selected remedy for groundwater is enhanced bioremediation of the source area, biosparging and monitored natural attenuation, and institutional controls. This treatment train will remove VOCs in groundwater at MLP/VAB.

## Biosparging and Monitored Natural Attenuation (MNA)

A Resource Conservation and Recovery Act (RCRA) CMS was conducted to identify and evaluate potential technologies for reducing contaminants present in groundwater to acceptable regulatory cleanup target levels. Biosparging and MNA were chosen as the final remedy to address vinyl chloride in groundwater across the toe of the plume.

The biosparging technology will use indigenous microorganisms to reduce organic constituents in the saturated zone. First, the biosparging system will inject air and nutrients into the saturated zone to increase biological activity of the indigenous microorganism to promote biodegradation of VOCs by providing an aerobic environment. The groundwater will be monitored throughout the life of the system to document the decrease in contaminant concentrations. Secondly, MNA will monitor the progress of natural processes to reduce VOC concentrations over time.

## Conclusion

The final remedy for the source area (enhanced bioremediation) has been delayed due to the refurbishment and roof replacement of the VAB. Upon completion of the construction project this remedy will be deployed. However, to assure that the groundwater is not being used for drinking water an institutional control for this facility has been implemented.

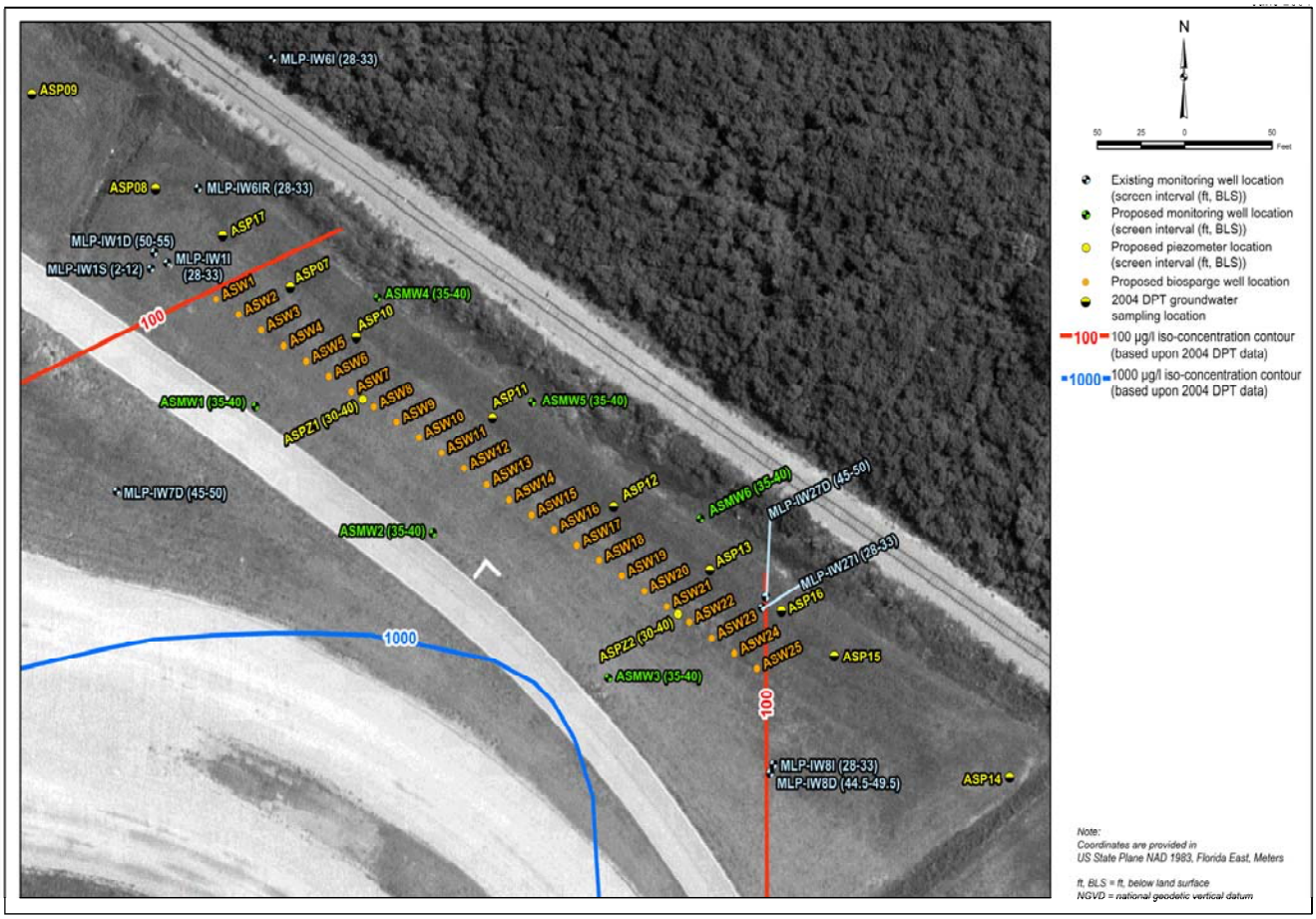


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Figure 6-1
Biosparge Well Layout

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**This Fact Sheet was written and produced by the NASA/KSC Environmental Program Office. All comments or questions can be made by calling (321) 867-6971 or by writing to the following address:**

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